

## INTERCONNECT STRUCTURE AND PROCESS FOR SILICON OPTICAL BENCH

### ABSTRACT

5 A process and structure for forming an optical subassembly in an integrated circuit, comprising: defining electrically conducting lines and bonding pads in a metallization layer on a substrate; depositing a passivation layer over the metallization layer; etching the passivation layer to remove the passivation layer from each of the bonding pads and a portion of the metallization layer associated with each of the bonding pads; diffusing Cr from the lines proximate said bonding pads to prevent solder wetting down lines; bonding an optical device to one of the bonding pads; and attaching the substrate to a carrier utilizing solder bond attachment.

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